

CLAIMS

1. A nozzle arrangement which is suitable for use in the generation of a spray or aerosol and which is adapted for connection to a fluid supply, the nozzle arrangement including a fluid inlet through which fluid enters the arrangement from the fluid supply and fluid outlet through which the fluid is ejected from the nozzle arrangement, said fluid inlet and said fluid outlet being connected to a fluid flow passage through which, in use, fluid flows from the inlet to the outlet, wherein the nozzle arrangement includes control means provided in the passage which, in use, acts to modify the flow characteristics of the fluid in the fluid flow passage to effectively control fluid droplet size produced in the spray or aerosol by the nozzle arrangement.
2. A nozzle arrangement according to claim 1, wherein the control means comprises an expansion means wherein a dimension of the passage transversely to the direction of fluid flow is increased relative to the same dimension of the remainder of the passage and said means extends over a substantial part of a length of said passage and forms a chamber.
3. A nozzle arrangement according to claim 1 or claim 2, wherein the control means comprises inner orifice means wherein the dimension of the passage transversely to the direction of fluid flow is decreased relative to the same dimension of the remainder of the passage.

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4. A nozzle arrangement according to any one of Claims 1 to 3, wherein the control means comprises a multiple channel means wherein at least a part of the passage is divided into from 1 to 12 channels each of which has a decreased dimension transversely to the direction of fluid flow relative to the same dimension of the remainder of the passage.
5. A nozzle arrangement according to any one of Claims 1 to 4, wherein the control means comprises a dog leg means wherein the flow through the passage is redirected in the direction as substantially transversely to the direction of flow in the passage over the length of the means.
6. A nozzle arrangement according to any one of Claims 1 to 5, wherein the control means comprises a swirl means rotational flow is induced in the fluid about the direction of flow of fluid in the passage.
7. A nozzle arrangement according to any one of Claims 1 to 6, wherein the control means comprises venturi means comprising a narrow passage broadening to a relatively wide passage with a narrow air inlet entering the passage near the point of which the passage broadens.
8. A nozzle arrangement according to any one of Claims 1 to 7, wherein the nozzle arrangement has more than one fluid flow passage.
9. A nozzle arrangement according to Claim 1, wherein the nozzle

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arrangement has more than one fluid inlet and/or fluid outlet.

10. A nozzle arrangement according to Claim 8 or Claim 9, wherein the nozzle arrangement includes a selection means at the, or each, fluid inlet which is operable to select through which of the fluid flow passages the fluid flows.
11. A nozzle arrangement according to Claim 10, wherein the selection means operates to select which of the fluid flow passages the fluid flows through according to the pressure of the fluid.
12. A nozzle arrangement according to any one of Claims 9 to 11, wherein the nozzle arrangement comprises a fluid outlet for each fluid flow passage.
13. A nozzle arrangement according to Claim 8 or Claim 9, wherein each respective fluid flow passage combines at a single fluid outlet.
14. A nozzle arrangement including control means comprising in combination an expansion means and a constriction means according to any preceding claim.
15. A nozzle arrangement according to Claim 14, wherein the expansion means is closest to the fluid outlet and the constriction means is closest to the fluid inlet.
16. A nozzle arrangement including control means comprising in combination an expansion means, a constriction means and a dog leg means according to any preceding claim.

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17. A nozzle arrangement according to Claim 16, wherein from the fluid outlet to the fluid inlet, control means comprises an expansion means, said constriction means and said dog leg means.
18. A nozzle arrangement including control means comprising in combination, an expansion, an inner orifice means, a swirl means and a venturi means according to any preceding claims.
19. A nozzle arrangement according to any one of Claims 8 to 17, wherein the nozzle arrangement comprises at least two fluid flow passages each with a separate fluid outlet.
20. A nozzle arrangement according to Claim 19, wherein the nozzle arrangement includes three or more fluid flow passages.
21. A nozzle arrangement including control means comprising expansion means and inner orifice means according to any preceding claim.
22. A nozzle arrangement particularly for industrial use, including control means comprising an expansion means, a constriction means, an inner orifice means, a swirl means and a venturi means according to any preceding claim.
23. A nozzle arrangement according to any one of Claims 1 to 22, wherein the fluid outlet is covered by a movable hinge flap which, when in a closed position, affords protection to the fluid outlet.
24. A nozzle arrangement according to any one of Claims 1 to 23, wherein the nozzle arrangement is formed by at least two

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interconnected parts and the parts are movable apart to enable cleaning of the nozzle arrangement.

25. A nozzle arrangement according to Claim 24, wherein the nozzle arrangement is formed in two parts interconnected by a hinge to enable the parts to be moved towards and away from each other.
26. A nozzle arrangement according to either Claim 24 or Claim 25, wherein one or both of said interconnected parts include a seal which when the parts are brought together to form the nozzle arrangement prevent fluid in the nozzle arrangement from leaking out.
27. A nozzle arrangement according to Claim 2 wherein the expansion means is provided adjacent said fluid outlet.
28. A nozzle arrangement according to Claim 2 or Claim 27 wherein the expansion means forms a chamber of substantially circular configuration.